

ABSTRACT

A method of producing a magnetic garnet single crystal film formation substrate 2 for growing a magnetic garnet single crystal film by liquid phase epitaxial growth is provided. First, a base substrate 10 composed of a garnet-based single crystal being unstable with a flux used for the liquid phase epitaxial growth is formed.

5 Next, a buffer layer 11 composed of a garnet-based single crystal thin film formed at least on a crystal growing surface of said base substrate 10 and being stable with the flux is formed. When forming the buffer layer 11 on the base substrate 10, it is formed by a thin film

10 formation method, such as sputtering, without heating the

15 substrate 10 in a positive manner.